DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	SIGNAL POND	Lake Area (ha):	2.43
Town:	ERROL	Maximum depth (m):	4.1
County:	Coos	Mean depth (m):	1.0
River Basin:	Androscoggin	Volume (m^3):	20500
Latitude:	44°46'10" N	Relative depth:	2.3
Longitude:	71°12'45" W	Shore configuration:	1.19
Elevation (ft):	2138	Areal water load (m/yr):	8.14
Shore length (m):	600	Flushing rate (yr^{-1}):	8.10
Watershed area (ha):	30.7	P retention coeff.:	0.58
% watershed ponded:	0.0	Lake type:	

BIOLOGICAL:		11 February 1992	7 August 1991
DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	SPARSE - NO DOMINANT
	#2		
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			1090
CHLOROPHYLL-A (µg/L)			6.35
DOM. ZOOPLANKTON (% TOTAL)	#1	SYNCHAETA 65%	TRICHOCERCA 37%
	#2		KERATELLA 20%
	#3		SYNCHAETA 20%
ROTIFERS/LITER		25	262
MICROCRUSTACEA/LITER		9	35
ZOOPLANKTON ABUNDANCE (#/L)		34	305
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			2.7
BOTTOM DISSOLVED OXYGEN (mg/L)		4.1	1.0
BACTERIA (fecal col., #/100 ml)	#1		< 1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : None

CHEMICAL:

Lake: SIGNAL POND
Town: ERROL

	11 February 1992		7 August 1991		
DEPTH (m)	1.0	3.0	1.0		3.5
pH (units)	4.9	5.0	4.9		4.9
A.N.C. (Alkalinity)	-0.1	0.2	-0.6		-0.4
NITRATE NITROGEN	0.05	0.02	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	0.004	0.004	0.011		0.012
CONDUCTIVITY (µmhos/cm)	25.1	22.7	20.1		20.4
APPARENT COLOR (cpu)	55	50	24		47
MAGNESIUM			0.33		
CALCIUM			< 1.0		
SODIUM			< 1.0		
POTASSIUM			< 0.40		
CHLORIDE	< 3	< 3	< 2		< 2
SULFATE	5	5	6		5
TN : TP					
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1991

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	3	1	7	Meso.

COMMENTS:

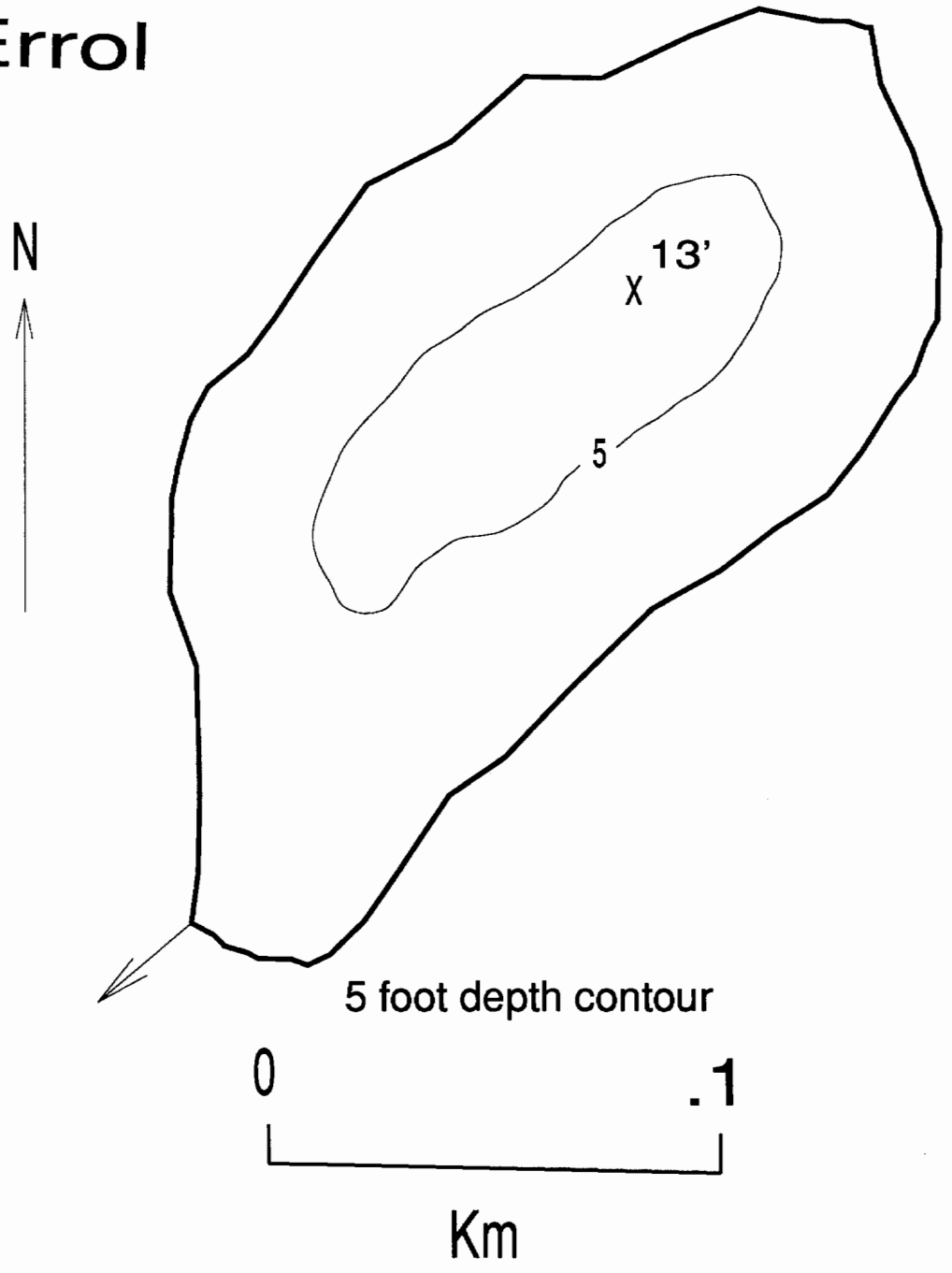
1. This is a remote pond, less than 10 acres, sampled cooperatively with the NH Fish and Game Department. It has also been monitored for acid rain impacts on an annual basis since 1982 as part of the High Elevation Remote Trout Ponds program.

2. Limited depth soundings were taken because of a fragile leaky boat.

3. The green algae Botryococcus (45%) and Oocystis (30%) were the dominant genera of wholewater plankton.

Signal Pond

Errol



FIELD DATA SHEET

LAKE: SIGNAL POND
DATE: 08/07/91

TOWN: ERROL
WEATHER: PARTLY CLOUDY; WARM & BREEZY

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	20.3	9.5	103 %
	1.0	18.5	9.5	99 %
	2.0	16.0	9.5	95 %
	3.0	15.1	4.6	45 %
	4.0	11.1	1.0	9 %

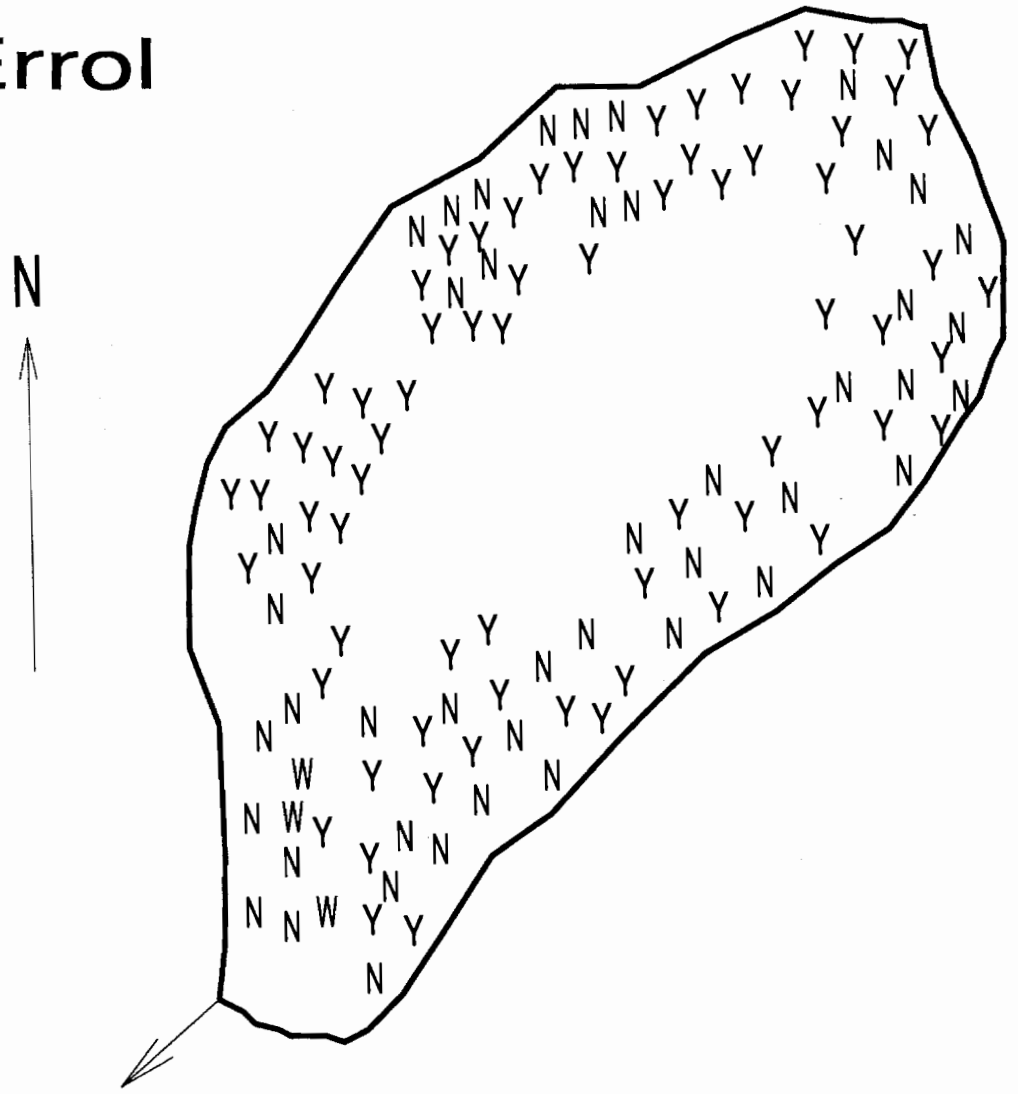
SECCHI DISK (m): 2.7
BOTTOM DEPTH (m): 4.1
TIME: 1230

COMMENTS:

*Dissolved oxygen values are in mg/L

Signal Pond

Errol



AQUATIC PLANT SURVEY

LAKE: SIGNAL POND TOWN: ERROL DATE: 08/07/91

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
N	Nymphaea	White water lily	Common
Y	Nuphar	Yellow water lily	Common
W	Potamogeton	Pondweed	Sparse

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

1. Most of the pond was less than 5 feet in depth and was covered with lily pads. The open water area in the middle of the pond was greater than 5 feet in depth.